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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,086	04/18/2007	Wendy Mackay	017346-0187	8293

22428 7590 06/04/2010
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EXAMINER

TSENG, CHARLES

ART UNIT	PAPER NUMBER
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2628

MAIL DATE	DELIVERY MODE
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06/04/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,086	Applicant(s) MACKAY ET AL.	
	Examiner CHARLES TSENG	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>4/21/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Claim Objections

2. Claim 1 is objected to because of the following informalities: claim 1 ends with a “,” rather than a “.”; “actiated” should be “activated” in the second to last line of claim 1; the second reference to memory in claim 2 should read “memory (15)” instead of “memory (5)”; the “display device (5)” of claim 9 should read “display device (6)”; claim 10 appears to recite identical limitations to claim 9 and is redundant. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-15 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-15 are directed to a “data-processing installation.” It is not clear what category of statutory invention corresponds to the claimed “installation.” To the extent Applicant intended to claim a machine-based system, Applicant should amend the claim

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to recite a "data processing system" or "a system for data processing." For the purposes of the following Action, Examiner interprets "installation" as a system. Appropriate correction is required.

Claim 17 is directed to a method of using a data processing installation. Again, it is unclear what "installation" refers to. Furthermore, claim 17 appears to be a dependent claim in reciting "a processing means as recited in claim 16." As claim 16 is directed to a device, it is not clear whether claim 17 is directed to a method or a device. In addition, claim 17 recites means plus function language such as "processing means," "recognition means," and "interaction means" incompatible with a method claim. Appropriate correction is required.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-15 and 17 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-15 are directed to a "data-processing installation." It is not clear what category of statutory invention corresponds to the claimed "installation." To the extent Applicant intended to claim a machine-based system, Applicant should amend the claim to recite a "data processing system" or "a system for data processing." For the purposes of the following Action, Examiner interprets "installation" as a system. Appropriate correction is required.

Claim 17 is directed to a method of using a data processing installation. Again, it is unclear what "installation" refers to. Furthermore, claim 17 appears to be a dependent claim in reciting "a processing means as recited in claim 16." As claim 16 is directed to a device, it is not clear whether claim 17 is directed to a method or a device. In addition, claim 17 recites means plus function language such as "processing means," "recognition means," and "interaction means" incompatible with a method claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2, 5-8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mackay et al., *The A-Book, An Augmented Laboratory Notebook for Biologists*, ERCIM News No. 46, July 2001 (hereinafter "Mackay") in view of Butcher et al. (U.S. Patent 6,355,889, hereinafter "Butcher").

For claim 1, Mackay discloses a data-processing installation (disclosing a computer-augmented laboratory notebook (page 52)), characterized in that it includes: a writing medium defining at least one zone (4) adapted for the entry of handwritten primary data by a user (disclosing a prototype with a WASCOM graphics tablet to capture hand-writing (page 53/Fig. 2)); recognition means (5) arranged to capture said

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primary data entered in said field (4) (disclosing a prototype with a WASCOM graphics tablet to capture hand-writing (page 53/Fig. 2)); a display device (6) arranged to display data (disclosing a computer display to display a processing operator associated with handwritten text such as underlined text where a user may click on the underlined text to access a link to a corresponding on-line version of the original source of information (page 53/Fig. 5)); interaction means (8) arranged to enable a user i) to associate processing operators and/or secondary data with primary data entered in said field (4) (disclosing the prototype allows the user to underline and box handwritten data to associate links, web addresses and other information with handwritten data (page 53/Fig. 5)), and ii) to activate primary data entered or associated secondary data when it designates external data stored in at least one database (9) (disclosing the user can access an on-line index (or database) to acquire information specified by the operations associated with handwritten data such as the underline and box operations (page 53/Fig. 5)); processing means (10) arranged i) to associate a timestamp representing the moment of data entry or association and an identifier representing the zone (4) with said processing operators and/or said primary or secondary data (disclosing the prototype captures the handwritten data and associates it with the correct page and a time-stamped on-line record of the data along with subsequent processing operators such as underline and box operations (page 53/Fig. 5)), and ii) in case of activation of primary or secondary data by a user, to access the database (9) in which the external data designated by said activated primary or secondary data is stored, such that this external data is displayed by said display device (6) (disclosing a computer display to

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display a processing operator associated with handwritten text such as underlined text where a user may click on the underlined text to activate the link to a corresponding on-line version of the original source of information (page 53/Fig. 5)).

Examiner finds Mackay discloses a database in the form of an on-line index for enabling users to access links to on-line information. In any case, the use of database linking to a tablet-based system is well-known in the art as disclosed in Butcher.

Butcher discloses a data processing system with a computer and a tablet for the input of handwritten information (Fig. 1; col. 2/lines 53-61). Butcher discloses a personal information management (PIM) tool with a PIM database and a stroke (ink) database with time stamped entries (Fig. 2; col. 2/lines 1-21). Butcher discloses links are created between entries in the two databases for corresponding time stamps to allow users to retrieve handwritten notes and other information for an entry in the PIM database (col. 2/lines 1-21).

A person having ordinary skill in the art (PHOSITA) at the time the invention was made would find it obvious to modify Mackay with the teachings of Butcher. Butcher is analogous art in dealing with electronic tablets for handwritten input and the access of handwritten information in a similar manner to traditional paper notebooks (col. 1/lines 5-46). Butcher discloses its invention is advantageous in linking entries between two databases for allowing users to subsequently access information (col. 1/lines 50-55). Consequently, a PHOSITA would incorporate the teachings of Butcher into Mackay to implement the linking of entries between two databases for allowing users to

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subsequently access information. Therefore, claim 1 is rendered obvious to a PHOSITA at the time the invention was made.

For claim 2, Mackay as modified by Butcher discloses a memory (15) linked to said processing means (10), and in that said processing means (10) are arranged to store in said memory (15) the primary and secondary data in correspondence with their timestamps and/or their respective zone identifiers (Mackay discloses the a-book captures an electronic copy of the handwritten data and the corresponding correct page and time-stamped record (page 53) and it follows the a-book has a memory for storing the electronic copy; Butcher likewise discloses a computer and databases for storing the handwritten information and corresponding time stamps (Figs. 1-2; col. 2/lines 1-21)).

For claim 5, Mackay as modified by Butcher discloses said recognition means (5) include a pen arranged to enable a user to enter primary and/or secondary data via said medium (3), and to capture the primary and/or secondary data thus entered and to communicate it to said processing means (10) (Mackay discloses the prototype captures handwriting with a WACOM graphics tablet performed through the use of a pen where the inputted information may be subsequently accessed by other users (page 52/Figs. 2 and 5)).

For claim 6, Mackay as modified by Butcher discloses said recognition means (5) include a pen arranged to enable a user to enter primary and/or secondary data via said medium (3), to capture this primary and/or secondary data thus entered in cooperation with said recognition means (5), and to communicate it to said processing means (10)

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(Mackay discloses the prototype captures handwriting with a WACOM graphics tablet performed through the use of a pen where the inputted information may be subsequently accessed by other users (page 52/Figs. 2 and 5)).

For claim 7, Mackay as modified by Butcher discloses said recognition means (5) include a graphic tablet capable of accommodating said medium (3) and arranged to capture said primary and secondary data entered via said medium (3) and to communicate it to said processing means (10) (Mackay discloses the prototype captures handwriting with a WACOM graphics tablet performed through the use of a pen where the inputted information may be subsequently accessed by other users (page 52/Figs. 2 and 5)).

For claim 8, Mackay as modified by Butcher discloses said medium (3) is an electronic notebook defining a multiplicity of zones (4) for the entry of primary and/or secondary data (Mackay discloses the prototype as a computer-augmented laboratory notebook with a plurality of zones for the input of handwritten data (pages 52-53/Figs. 1-2)).

For claim 15, Mackay as modified by Butcher discloses said computer (1) is connected to the Internet and/or to at least one private database (9) (Butcher discloses a data processing system with a computer and a tablet for the input of handwritten information (Fig. 1; col. 2/lines 53-61) where the system is connected to a personal information management (PIM) tool with a PIM database and a stroke (ink) database with time stamped entries (Fig. 2; col. 2/lines 1-21)).

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8. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mackay in view of Butcher further in view of Fekete et al., *Using the Multi-Layer Model for Building Interactive Graphical Applications*, In Procs. Of UIST '96, 1996 (hereinafter "Fekete").

For claim 3, Mackay as modified by Butcher discloses the processing means (10) are arranged to associate primary level identifiers (18) and secondary level identifiers (20) with said primary and secondary data in a zone (4), such that said zone (4) and its data can be broken down into levels (Mackay discloses representing data as separate layers of information with hand-writing as a primary layer and additional layers to provide annotations, explanations, interpretations and other additional information (page 53)).

Examiner finds Mackay discloses the arrangement of data in levels or layers for the reasons described above. In any case, these limitations are well-known in the art as disclosed in Fekete.

Fekete discloses a multi-layer model with layers to distinguish between layers for visualization, feedback and interaction management (Abstract at page 109; Section 4 "The Multi-Layer Model" at pages 110-111) where a layer may be a stroke layer corresponding to handwritten input from a pen (Section 4 "The Multi-Layer Model" at page 111).

A PHOSITA at the time the invention was made would find it obvious to modify Mackay and Butcher with the teachings of Fekete. Fekete is analogous art in dealing with interactive graphical editors as applied to tablet-based systems (page 116). Fekete

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discloses its multi-layer model is advantageous for specializing layers to take advantage of available resources to efficiently manage the graphic structure and optimize redisplay of objects (page 110). Consequently, a PHOSITA would incorporate the teachings of Fekete into Mackay and Butcher to implement a multi-layer model for specializing layers to take advantage of available resources to efficiently manage the graphic structure and optimize redisplay of objects. Therefore, claim 3 is rendered obvious to a PHOSITA at the time the invention was made.

For claim 4, Mackay as modified by Butcher and Fekete discloses the medium (3) is arranged to deliver tertiary data representing an input mask of said zone (4) to said processing means (10), and in that said processing means (10) are arranged to associate tertiary level identifiers (17) with said tertiary data in a zone (4) before storing the data in said memory (15) (Mackay discloses representing data as separate layers of information with hand-writing as a primary layer and additional layers to provide annotations, explanations, interpretations and other additional information (page 53); Fekete discloses a layer within its multi-layer model corresponding to a stroke layer for handwritten input from a pen (Section 4 "The Multi-Layer Model" at page 111)).

9. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mackay in view of Butcher further in view of Chatani (U.S. Patent 5,590,107).

For claim 9, Mackay as modified by Butcher discloses at least one computer (1) incorporating said display device (6), said recognition means (5) and at least one part of said processing means (10) (Mackay discloses a prototype for a computer augmented

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laboratory notebook with a WACOM graphics tablet to accept handwritten input and subsequently display the handwritten information and other associated information (pages 52-53/Figs. 2 and 5); Butcher discloses a computer system with a display, computer and tablet for accepting handwritten input and subsequently display the handwritten notes and other information (Fig. 1)).

Examiner find Mackay and Butcher discloses a computer incorporating the display device, recognition means and processing means for the reasons discussed above. In any case, these limitations are well-known in the art as disclosed in Chatani.

Chatani discloses a computing device with a display serving as the writing medium for accepting handwritten input for subsequent display (Fig. 4).

A PHOSITA at the time the invention was made would find it obvious to modify Mackay and Butcher with the teachings of Chatani. Chatani is analogous art in dealing with tablet-based systems (Fig. 4). Chatani discloses its invention is advantageous in integrating the writing medium with the display to construct a portable information processing apparatus for accepting handwritten input (Fig. 4; col. 6/lines 56-66).

Consequently, a PHOSITA would incorporate the teachings of Chatani into Mackay and Butcher for integrating the writing medium with the display to construct a portable information processing apparatus for accepting handwritten input. Therefore, claim 9 is rendered obvious to a PHOSITA at the time the invention was made.

For claim 10, Mackay as modified by Butcher and Chatani discloses at least one computer (1) incorporating said display device (6), said recognition means (5) and at least one part of said processing means (10) (Mackay discloses a prototype for a

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computer augmented laboratory notebook with a WACOM graphics tablet to accept handwritten input and subsequently display the handwritten information and other associated information (pages 52-53/Figs. 2 and 5); Butcher discloses a computer system with a display, computer and tablet for accepting handwritten input and subsequently display the handwritten notes and other information (Fig. 1); Chatani discloses a computing device with a display serving as the writing medium for accepting handwritten input for subsequent display (Fig. 4)).

For claim 11, Mackay as modified by Butcher and Chatani discloses said display device (6) also constitutes said medium (3) (Chatani discloses a computing device with a display serving as the writing medium for accepting handwritten input for subsequent display (Fig. 4)).

For claim 12, Mackay as modified by Butcher and Chatani discloses said computer (1) includes at least one part of said interaction means (8) (Mackay discloses a prototype for a computer augmented laboratory notebook with a WACOM graphics tablet to accept handwritten input and subsequently display the handwritten information and other associated information (pages 52-53/Figs. 2 and 5); Butcher discloses a computer system with a display, computer and tablet for accepting handwritten input and subsequently display the handwritten notes and other information (Fig. 1); Chatani discloses a computing device with a display serving as the writing medium for accepting handwritten input for subsequent display (Fig. 4)).

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10. Claims 13-14 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mackay in view of Butcher further in view of Fitzmaurice, *Situated Information Spaces and Spatially Aware Palmtop*, Communications of the ACM, Association for Computing Machinery, New York, Vol. 36, No. 7, July 1, 1993 (from the IDS submitted April 21, 2005).

For claim 13, Mackay as modified by Butcher does not disclose the system further comprises a personal digital assistant including an auxiliary display arranged to enable the entry of secondary data by the user. However, these limitations are well-known in the art as disclosed in Fitzmaurice.

Fitzmaurice discloses a personal digital assistant in the form of an integrated palmtop unit with an input controller and output display (page 43/col. 1). Fitzmaurice discloses the palmtop unit serves as an information lens near physical objects and the contents of the display are affected by a user's gestures and movements (page 43/col. 1). Fitzmaurice discloses the palmtop unit allows users to electronically annotate objects (page 46/col. 2-3) with pen input enabling users to handwrite electronic notes and annotations (page 47/col. 3 and page 48/col. 1). Fitzmaurice's palmtop monitor is one part of a larger computer system (See e.g. page 41/Fig. 2) and it follows the system of Mackay and Butcher may be extended to support Fitzmaurice's palmtop monitor as an auxiliary display as another tablet device for capturing information (see above as to claim 1).

A PHOSITA at the time the invention was made would find it obvious to modify Mackay and Butcher with the teachings of Fitzmaurice. Fitzmaurice is analogous art in

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dealing with tablet-based systems (page 47/col. 3 and page 48/col. 1). Fitzmaurice discloses its palmtop unit is advantageous in serving as a bridge between electronic information and physical objects in providing a spatially aware information lens to present contextual information to a user (page 43/col. 1). Consequently, a PHOSITA would incorporate the teachings of Fitzmaurice into Mackay and Butcher implementing a palmtop unit to serve as a bridge between electronic information and physical objects in providing a spatially aware information lens to present contextual information to a user. Therefore, claim 13 is rendered obvious to a PHOSITA at the time the invention was made.

For claim 14, Mackay as modified by Butcher and Fitzmaurice discloses tracking means (25) integral with said personal digital assistant (23), connected to said recognition means (5), and arranged to determine the position of the auxiliary display (24) relative to said medium (3), such that the part of said zone displayed on said auxiliary display (24) substantially matches the portion of the zone (4) of the medium (3) located under said auxiliary display (24) (Fitzmaurice discloses the palmtop unit is attached to a 6D input device to detect the position and orientation of the palmtop unit (page 43/col. 2) such that the information displayed on the palmtop unit corresponds to the physical area over which the palmtop unit is positioned (page 43/col. 1); Fitzmaurice discloses, for example, the palmtop unit displays weather information for a corresponding region on a map where the palmtop unit is positioned over the region of interest (page 45/Fig. 6) and it follows Fitzmaurice's palmtop unit may be applied to the

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writing medium or graphics tablet of Mackay and Butcher (see above as to claim 1) for displaying information concerning the corresponding region of interest).

For claim 16, this claim is directed to a data processing device with the same functionality of claims 1, 13 and 14. It follows claim 16 is rejected for the same reasons as to claims 1, 13 and 14.

For claim 17, this claim is directed to a method performed by the data processing system and device of claims 1 and 16. It follows claim 17 is rejected for the same reasons as to claims 1 and 16.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES TSENG whose telephone number is (571) 270-3857. The examiner can normally be reached on Monday-Friday 8-5 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, XIAO M. WU can be reached on (571) 272-7761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CHARLES TSENG
Examiner
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/XIAO M. WU/
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